VULCAN

OPERATION MANUAL

KLEENSCREEN FILTRATION SYSTEM

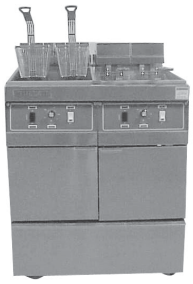
SUPPLEMENT INSTRUCTION MANUAL FOR:

Gas Fryer Models

GR35F	ML-126998
GR45F	ML-126999
GR65F	ML-135534
GR85F	ML-135535
GRD35F	ML-126732
GRD45F	ML-126735
GRD65F	ML-126738
GRD85F	ML-126740
GRC35F	ML-126733
GRC45F	ML-126736
GRC65F	ML-126739
GRC85F	ML-126742

Electric Fryer Models

ERD40F	ML-126905
ERD50F	ML-126906
ERD85F	ML-126908
ED225F	ML-126907
ERC40F	ML-126909
ERC50F	ML-126910
ERC85F	ML-126912
EC225F	ML-126911



2ERD35

3GRD35

For additional information on Vulcan-Hart Company or to locate an authorized parts and service provider in your area, visit our website at www.vulcanhart.com

VULCAN-HART COMPANY, P.O. BOX 696, LOUISVILLE, KY 40201-0696, TEL. (502) 778-2791

FORM 31234 Rev. A (Apr. 2003)

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OPERATION AND CARE OF KLEENSCREEN FILTRATION SYSTEM

SAVE THESE INSTRUCTIONS

GENERAL

The KleenScreen Filtration System filters the oil as it is pumped back to its respective tank. Valves inside the doors under each fry tank must be set so only one tank is being drained, filtered and pumped back at any one time.

The KleenScreen Filtration System is used on the following Vulcan Fryer Models:

Gas Fryers			Electric Fryers	
GR35F	*GRD35F*	*GRC35F*	*ERD40F*	*ERC40F*
GR45F	*GRD45F*	*GRC45F*	*ERD50F*	*ERC50F*
GR65F	*GRD65F*	*GRC65F*	*ERD85F*	*ERC85F*
GR85F	*GRD85F*	*GRC85F*	*ED225F*	*EC225F*

ASSEMBLY

1. After unpacking, wash the filter tank, crumb basket and filter screen. Use dishwashing detergent and warm water, or clean the components in a dishwasher. Rinse the filter tank, crumb basket and filter screen thoroughly. Wipe components dry with a clean cloth.
2. Pull the filter drawer out.
3. Place the filter tank in the filter drawer. Hang the crumb basket from the left tank handle inside the filter tank (Figs. 1 and 2). Position the filter screen assembly flat on the bottom of the filter tank so the filter orifice underneath the screen fits the suction hole in the bottom of the tank (Figs. 1 and 2). Close the drawer.
4. Make sure the two O-Rings are in place inside the filter suction port (Figs. 1 and 2). As the drawer is closed, make sure the filter suction connector fits tightly into the filter suction port (Figs. 1 and 2).

CONTROLS AND COMPONENT LOCATIONS — Gas Fryers

The filter tank cover is removed to show component locations.

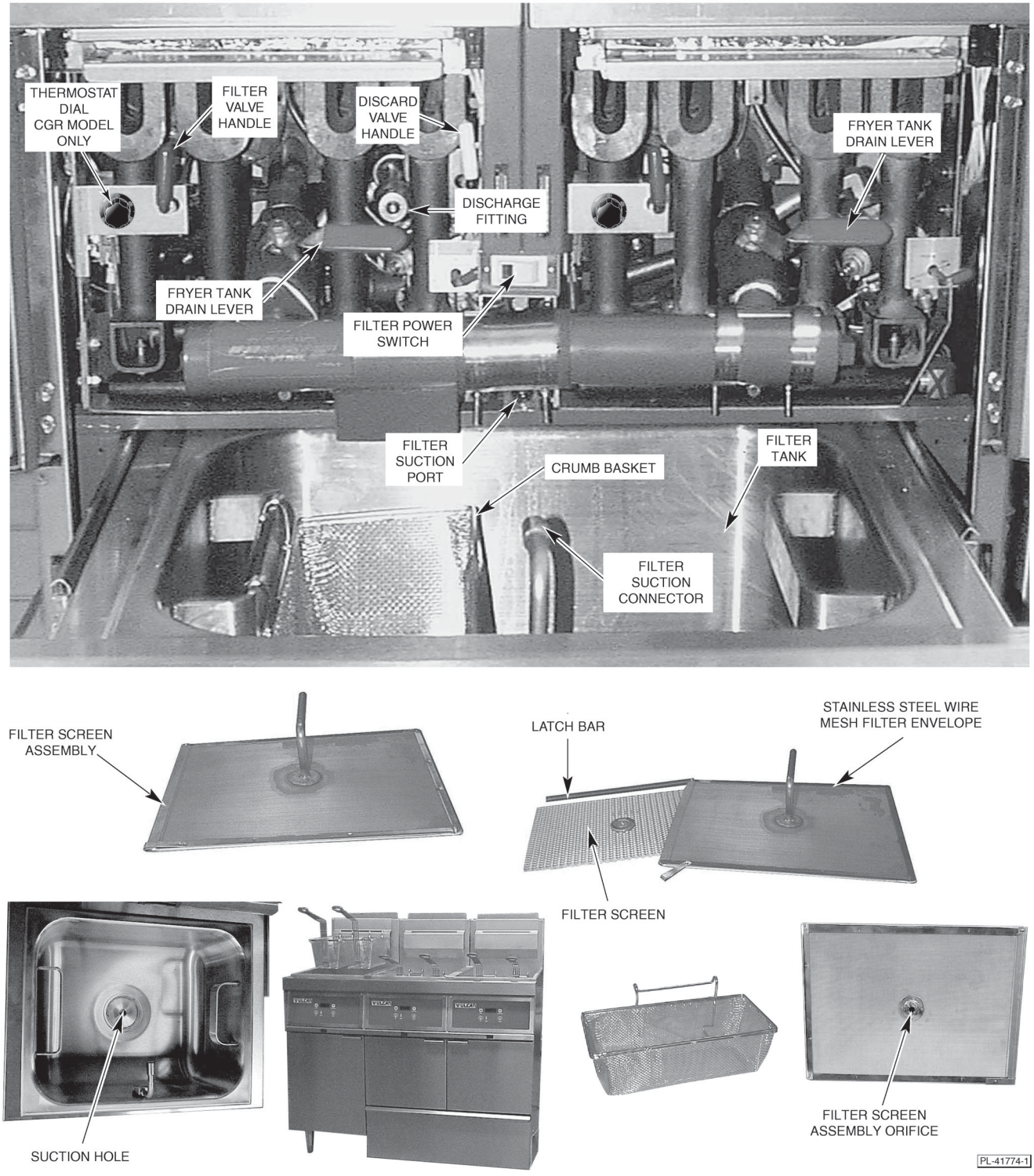
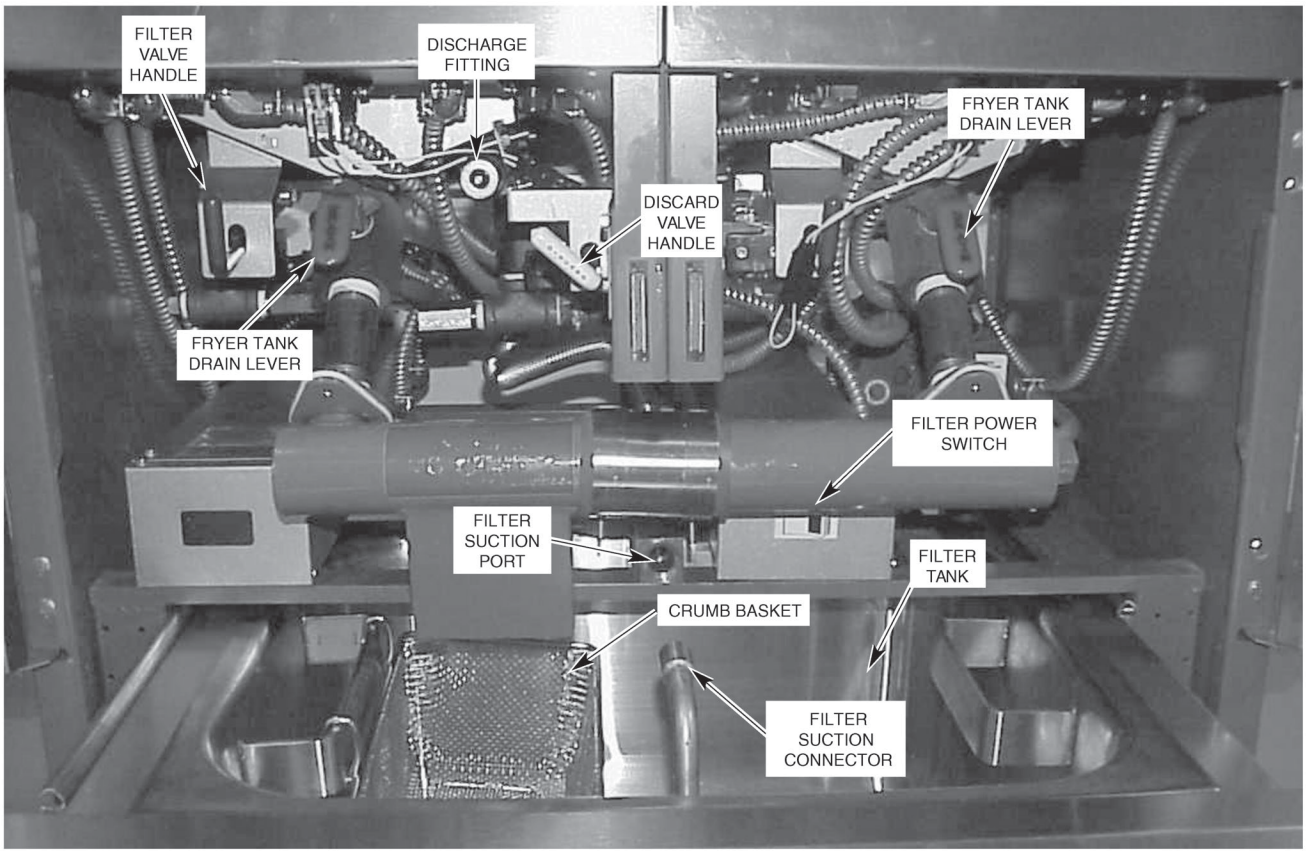


Fig. 1

CONTROLS AND COMPONENT LOCATIONS — Electric Fryers

The filter tank cover is removed to show component locations.



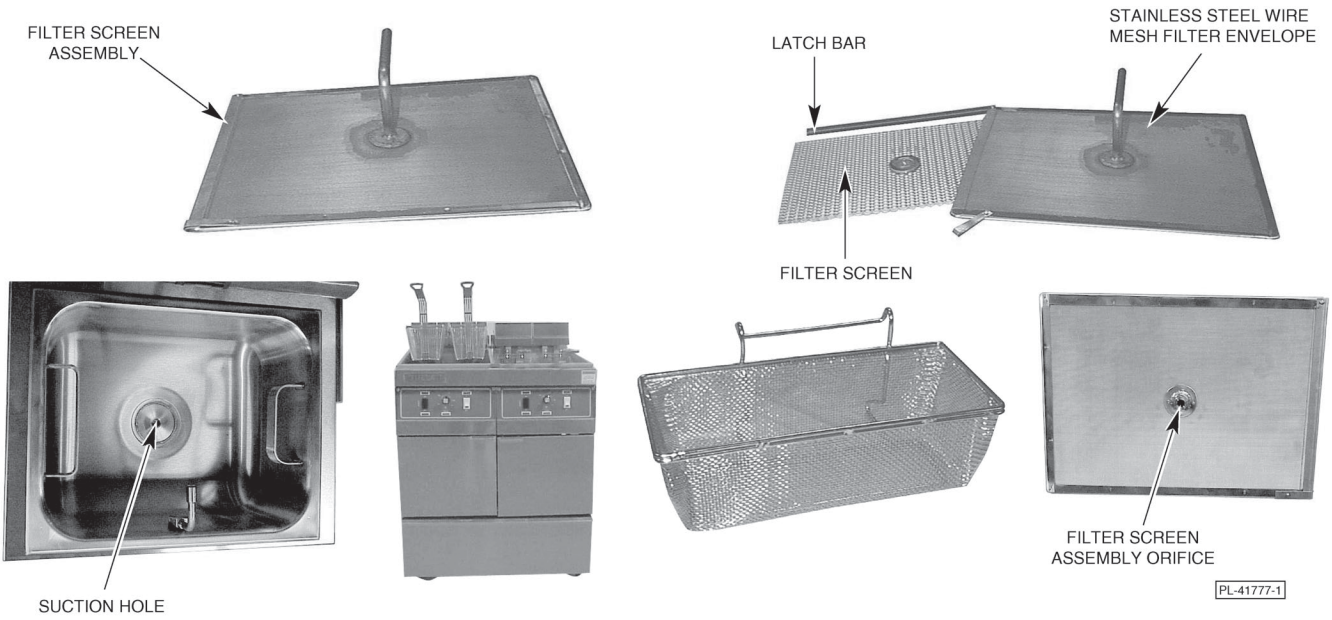


Fig. 2

OPERATION

WARNING: HOT FRYING COMPOUND AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE FRYER. USE CARE WHEN FILTERING. DO NOT LEAVE UNATTENDED.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE THE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

FILTERING PROCEDURE WHEN USING LIQUID SHORTENING

1. Turn the fryer's power OFF and open the doors (Fig. 3).

   NOTE: GRC and GRD models have a drain valve interlock system built in that will automatically shut the fryer off as soon as the drain valve is opened.

2. Slowly turn the red fryer tank drain lever counterclockwise (Fig. 5) until it stops. This allows the oil to drain into the filter tank.

   NOTE: Drain and filter only one fryer tank at a time.

3. Pull the filter drawer out. Lift the filter tank cover up (Fig. 4). Make sure filter tank and parts are properly assembled (pages 3 through 5).

Fig. 3

4. Add 8 ounces of diatomaceous earth to the filter tank. Agitate to mix the diatomaceous earth and shortening. Replace the filter tank cover. Slide the filter drawer back into place.

Fig. 4

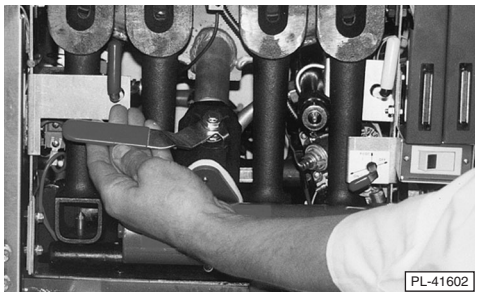
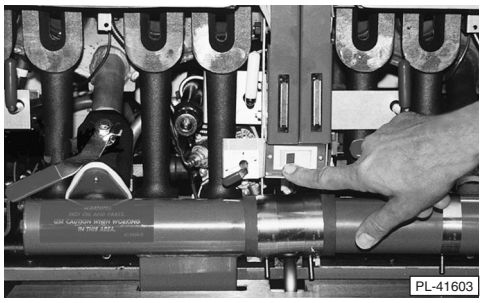
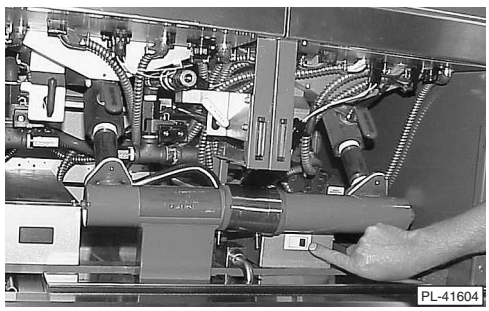


Fig. 5

5. Turn the filter power switch ON (Fig. 6). The red pilot light in the filter power switch comes on.



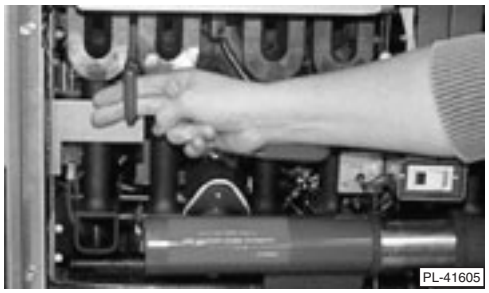
Gas Fryer



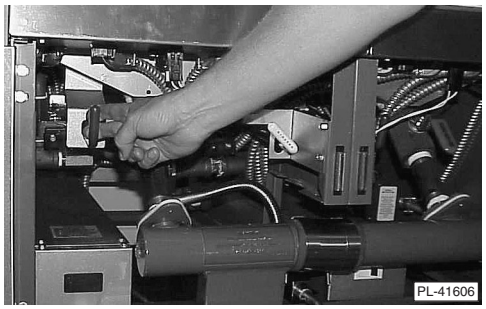
Electric Fryer

Fig. 6

6. To start filtering, pull out the red filter valve handle (Fig. 7) of the fryer tank to be filtered. Use a brush to remove all the residue from the bottom of the tank into the drain tube. Let the oil recycle for 1 to 3 minutes, flushing residue from the tank bottom into the filter.



Gas Fryer



Electric Fryer

Fig. 7

7. Close the red fryer tank drain lever (Fig. 8) by turning the lever clockwise until it stops. The fryer tank will now refill.

8. After filtering is complete (all oil is removed from the filter tank and air bubbles should appear in the fryer tank), push in the red filter valve handle completely (Fig. 9).

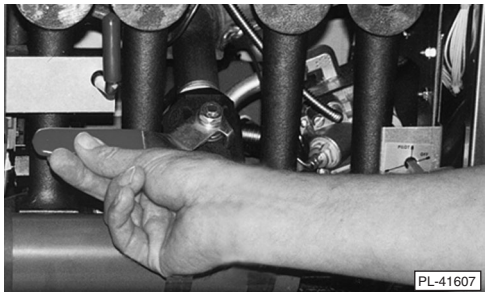
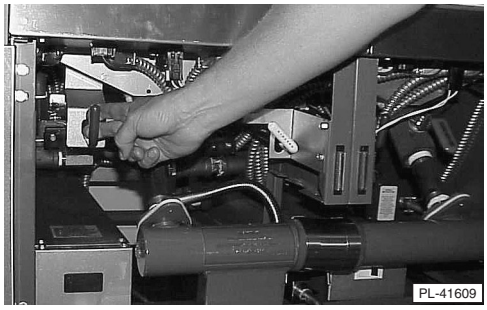


Fig. 8

Gas Fryer



Electric Fryer

Fig. 9

9. Turn the filter power switch OFF (Fig. 6).

10. Close the fryer doors.

FILTERING PROCEDURE WHEN USING SOLID SHORTENING

1. Follow the fat melt procedure discussed in the *INSTRUCTION* manual supplied with your fryer.

   WARNING: Do not set a complete block of solid shortening on top of an electric fryer's heating elements. Doing this may damage the elements and increase the potential for shortening flash fire. If solid shortening is to be used in an electric fryer, remove the baskets and crumb screen(s), pack the bottom of the tank completely with solid shortening, lower the elements and then pack the shortening COMPLETELY around over top of the elements. Lay crumb screen(s) in the tank on top of the packed shortening. Follow the Fat Melt instructions in the ER Fryer installation & operation manual. Once all shortening has been melted and the fryer has met the set temperature, fill baskets and resume frying.

2. Set the fryer thermostat at 350°F (177°C).
3. Once shortening has melted, stir oil to eliminate solid shortening in the cold zone (Fig. 10). All solid shortening must have melted completely.
4. Allow the fryer to idle at 350°F (177°C) for 10 minutes, if filtering from a cold start.
5. Turn the fryer off. Make sure filter tank and parts are properly assembled (pages 3 through 5). Make sure the filter drawer is completely closed before opening the drain valve. Open the drain valve and drain the shortening into the filter tank. Allow hot shortening to stand in the filter tank for approximately 6 to 10 minutes. Then proceed with steps 4 through 10 under Filtering Procedure when Using Liquid Shortening on pages 6 and 7.

Fig. 10

FILTERING TIPS

- If filtering at the end of the day, make sure all the oil is returned to the fryer tank.
- Open the filter drawer approximately 1" to allow any oil in the return line to run back into the filter tank. This will take about 30 seconds to complete.
- Close the filter drawer. If solid shortening is used, follow the "Melt" procedure the next morning.

PERIODICALLY REMOVE EXCESS DEBRIS FROM THE FILTER

The following operation is required after filtering one or more batches, as needed:

1. Pull the filter drawer out and remove the filter tank cover from the filter tank.
2. Remove the crumb basket and empty any debris into the trash.
3. Remove the filter screen assembly.
4. Scrape debris from the bottom of the filter tank and from the screen assembly into the trash.

   NOTE: Scrape debris away from suction hole to avoid compacting debris in hole.
5. Reinstall the filter screen assembly and crumb basket.
6. Replace the filter tank cover. Close the drawer.

FLUSH AND DISCARD

1. Turn the fryer power OFF.
2. Make sure filter tank and parts are properly assembled (pages 3 through 5). Open the fryer tank drain lever (Fig. 11) of the fryer tank that holds oil that is to be discarded.

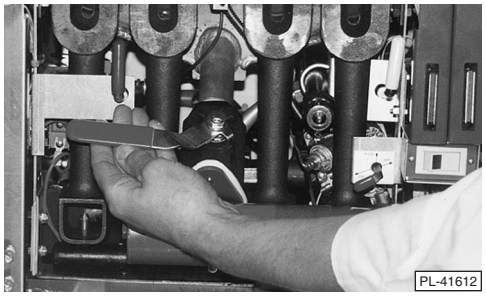
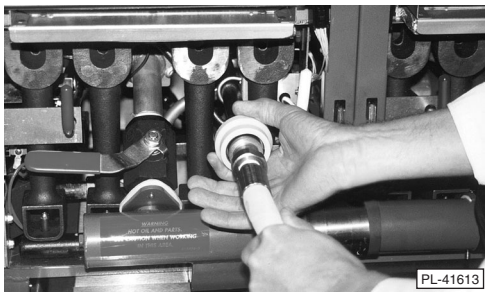
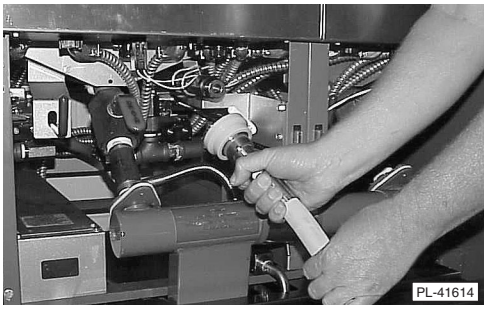


Fig. 11

3. While holding the discard hose at the base of the fitting, use your free hand to slide the collar away from the end of the female fitting (Fig. 12). Align the male and female parts of the quick disconnect line and push the hose onto the male connector discharge fitting. Release the collar. Pull the discharge hose away from the fryer to make sure discharge hose is fully inserted and locked.



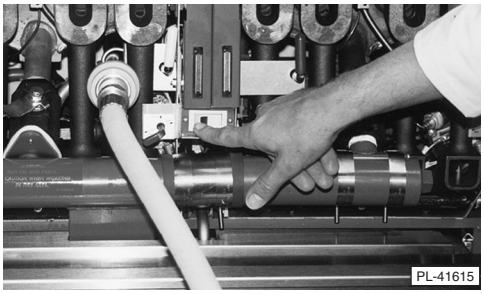
Gas Fryer



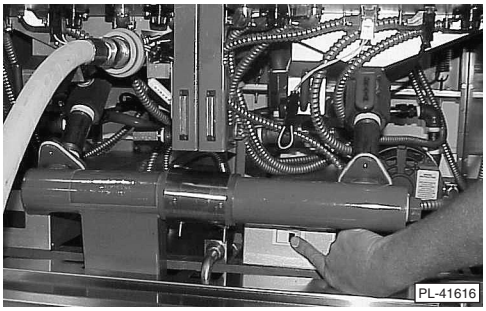
Electric Fryer

Fig. 12

4. Turn the filter power switch ON (Fig. 13).



Gas Fryer



Electric Fryer

Fig. 13

5. Place the nozzle in a suitable discharge container. To start the pump, pull the white discard valve handle out (Fig. 14); the oil begins to flow through the discard hose. If the discharge container is not large enough for the entire amount, stop the pump by pushing in the white discard valve handle, empty the container and resume. When the last of the oil is in the discharge container, stop the pump by pushing in the white discard valve handle, turn the filter power switch OFF and disconnect the discharge hose (Fig. 15).

6. Clean the filter drawer following the instructions on page 10.

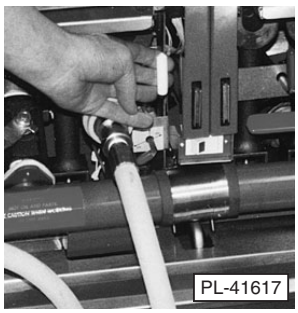


Fig. 14

Fig. 15

MAINTENANCE

WARNING: HOT FRYING COMPOUND AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE FRYER. USE CARE WHEN FILTERING.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE THE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT/TAGOUT PROCEDURES.

CLEANING THE FILTER DRAWER

1. Pull the filter drawer out and remove the filter tank cover.
2. After filter parts have cooled, lift the filter tank out of the drawer (Fig. 16). Set the filter tank aside.
3. Lift the drawer from the drawer slides (Fig. 17) and set the drawer aside.
4. Lift the drawer slides up and off the slide guides (Fig. 18).
5. Carry the parts to the sink area for cleaning.
6. Remove the crumb basket from the filter tank.
7. Remove and disassemble the filter screen assembly for cleaning (Fig. 19). The top left side of the assembly has a metal latch and bar. Slide the metal latch off the bar. Lift the bar up to allow access to the internal filter.

Fig. 16

Fig. 17

NOTE: The filter screen assembly should be cleaned daily. The filter screen assembly parts may be placed in a dishwasher or cleaned using a sink spraydown hose with dish detergent. However, periodic fryer boil-out cleaning is recommended to remove thick grease residue on the filter screen assembly. This residue may hinder the filtration process. If you notice that the oil filter return time is taking longer than 4 minutes to complete the filter cycle, boil-out of the screen assembly is recommended. This can be performed as part of the normal fry tank boil-out procedure (see Fryer Boil-Out Instructions on page 11).

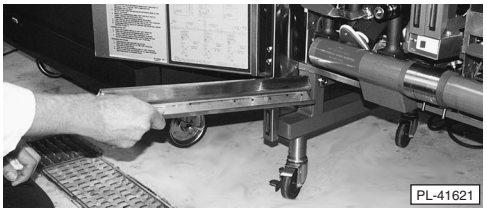


Fig. 18

8. Wash all parts of the filter, including the drawer and drawer guides, in normal dishwashing detergent. All parts are dishwasher-safe and can be cleaned in a commercial dishwasher instead of by hand.
9. Rinse parts thoroughly and wipe dry with a clean cloth. All parts must be completely dried before reuse.
10. Reinstall all removed filter parts before operating the filter system.
11. The top cover must be replaced before operating this system.

Fig. 19

FRYER BOIL-OUT INSTRUCTIONS

CAUTION: **Do not run water or boil-out solution through the filter motor or pump. Do not use the filter during boil-out or cleaning of the fryer.**

Before cleaning the fryer, read the entire cleaning instructions provided by the cleaning product's manufacturer. Some cleaners will require a boil-out procedure at boiling temperature, and some will not. If your cleaning product company calls for a boil-out procedure, follow their procedures after performing steps 1 through 5. If boil-out is required, but no procedures are stated, follow steps 1 through 23.

1. Turn off the fryer that is to be boiled out.
2. Remove and set aside the filter drawer assembly.
3. Drain all shortening from the fryer to be boiled out. Drain old shortening into a suitable disposal container and discard.
4. Remove the filter screen assembly from the filter drawer vessel and separate the screen into two parts (see page 10).
5. Place the two separated parts of the screen assembly into the fryer tank that is to be boiled out.
6. Following the cleaning instructions on page 10, clean the remaining drawer assembly parts.

Fig. 20

7. Place a stock pot under the drain manifold opening (Fig. 20).
8. Close the drain valve and fill the fryer tank with hot water to the **- Max -** fill line.
9. Set the fryer thermostat to 210°F to 225°F (99°C to 107°C) and turn the fryer on.
10. Allow water to come to a slow boil.
11. Add boil-out solution and mix thoroughly. The water in the fryer tank must be near boiling for the boil-out solution to dissolve completely and achieve maximum benefit.

    CAUTION: Adding boil-out solution to boiling water can cause the fryer to boil over.

12. Allow the fryer to simmer or slowly boil for 10 to 15 minutes. Watch the fryer to make sure it does not boil over. During the boil-out process, scrub the tank using the cleaning brush provided with the fryer. To avoid damage to the tank finish, do not use a metal brush or scouring pad.
13. Turn the fryer off and allow the boil-out solution to remain in the fry tank for another 10 to 15 minutes. The hot boil-out solution will continue to break down oil residue at water temperatures as low as 180°F (82°C).
14. Open the drain valve.
15. Drain the boil-out compound into the stock pot below the drain manifold opening (Fig. 21). Monitor the contents of the stock pot. The full content of the fryer tank may not fit into the stock pot. If not, close the drain valve when the stock pot is almost full and discard the boil-out solution.

Fig. 21

16. Replace the emptied stock pot below the drain manifold opening, and repeat steps 14 and 15 as many times as needed.
17. Close the drain valve and fill the tank with clean, hot water to the **- Max -** fill line; drain and discard as in steps 14 and 15.

18. After rinsing the tank, close the drain valve and refill the tank with hot water to the **- Max -** fill line.
19. Add 1 cup (0.2 L) of vinegar per 20 lb (9 kg) of fryer capacity to neutralize any caustic ingredients remaining from the boil-out solution.
20. Turn the fryer on and slow boil for a few minutes with the thermostat set at 210°F to 225°F (99°C to 107°C).
21. Turn the fryer off and drain the tank (see steps 14 and 15).
22. Close the drain valve and rinse the tank again with hot water.
23. Drain fryer tank (see steps 14 and 15) and remove. Dry and reassemble the filter screen assembly. Thoroughly dry the fryer tank. Close the drain valve. Reinstall the entire filter drawer assembly to the fryer. Fill the tank to the **- Min -** fill line with fresh oil or shortening.

TROUBLESHOOTING

NOTE: If using solid shortening, after all filtered oil has been returned to the fryer tank and the filter power switch is off, open the filter drawer approximately 1 inch. This allows the remaining shortening in the line to drain into the filter tank to prevent possible clogging as the shortening cools and solidifies.

SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTIVE ACTION
Oil not filtering or discarding; pump motor is on.	1. Drawer not closed all the way. 2. Filter screen is plugged. 3. Clog in filter system line(s). 4. Shortening is below 300°F (149°C) and too thick. 5. Mechanical problem with return or discard valve. 6. Pump is inoperative. 7. Discard hose connection not fully engaged.	1. Close the drawer. 2. Clean filter screen. 3. Call service. 4. Increase temperature above 300°F (149°C). 5. Call service. 6. Call service. 7. Remove and reconnect the hose.
Pump motor is not running.	1. Check 120 V power connection. 2. Filter power switch is not turned on. 3. Discard valve handle is not extended. 4. Pump motor not working.	1. Plug unit into 120 V receptacle. 2. Turn switch on. 3. Pull out discard valve handle. 4. Call service.

SERVICE

Contact your local Vulcan Service Office for any repairs or adjustments needed on this equipment.